

iPerl - next generation REPL for Perl

Árpád Szász Freelance Perl Developer

Twitter: @arpadszasz

Blog: http://arpi.plenum.ro



Introduction



Introduction

iPerl is a GUI based REPL



Introduction

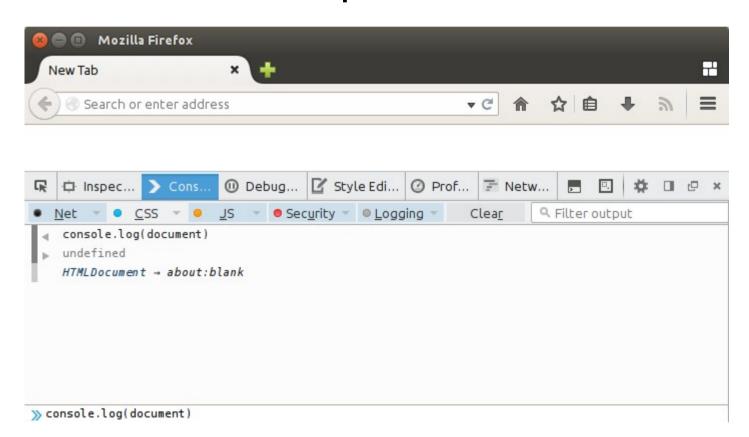
- iPerl is a GUI based REPL
- iPerl has live-coding features



Read-Eval-Print-Loop



Read-Eval-Print-Loop

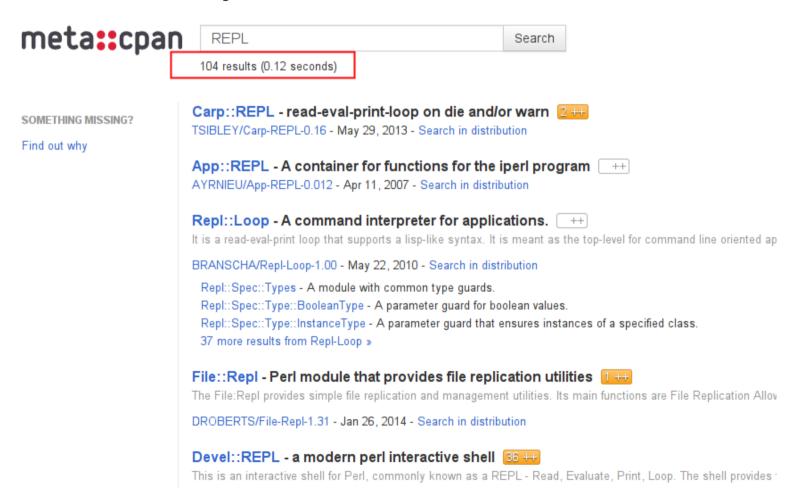




CPAN already has a lot of REPLs



CPAN already has a lot of REPLs





- Features of iPerl as a REPL
 - GUI based



- Features of iPerl as a REPL
 - GUI based
 - Simple to install and use



Idea and demo by vividsnow on blogs.perl.org

```
perl live coding
                                                        glEnable(GL VERTEX PROGRAM POINT SIZE):
                                                        glEnable(GL POINT SPRITE);
                                                         Bunshift @draw. sub (
                                                            mov(0,0,-5);
                                                            alUseProgramObjectARB(Sshader);
                                                            glUniform1fARB(glGetUniformLocationARB_p(sshader, 'time'), sts*7);
                                                            glPointSize(glutGet(GLUT WINDOW HEIGHT) * 0.9 * sin($ts) ** 2);
                                                            qlBegin(GL POINTS);
                                                            clr(cos($ts/3)/3+0.5,sin($ts*4)/3+0.5,cos($ts*2)/3+0.5,1);
D(1): warning C7583: Initialization of uniform variable
                                                                              4RB(0):
es requires #version 120 or later
D(3) : warning C7532: global variable ol PointCoord requishif
uires "eversion 120" or later
Use of uninitialized value in say at (eval 339) line 1,0
⇒ line 2.
Fragment info
9(1) : warning C7583: Initialization of uniform variable
es requires #version 120 or later
D(3) : warning C7532: global variable gl PointCoord requ
wires "#version 120" or later
no error
                                                        "scratch"
```



- Idea and demo by vividsnow on blogs.perl.org
 - Emacs perl-live mode



- Idea and demo by vividsnow on blogs.perl.org
 - Emacs perl-live mode
 - AnyEvent loop



- Idea and demo by vividsnow on blogs.perl.org
 - Emacs perl-live mode
 - AnyEvent loop
 - PadWalker + Package::Stash



It works

```
III iPerl
                                                         foreach ( 1 .. 10 ) {
say;
                           Evaluate (F5)
```



- It works
 - wxPerl based GUI



- It works
 - wxPerl based GUI
 - 1 thread for GUI, 1 thread for eval-ing code



It has bugs!



- It has bugs!
 - 'exit' stops the whole program



- It has bugs!
 - 'exit' stops the whole program
 - 'exec', 'sleep', 'while' will hang the whole program



- It has bugs!
 - 'exit' stops the whole program
 - 'exec', 'sleep', 'while' will hang the whole program
 - More unknown bugs!



- It has bugs!
 - 'exit' stops the whole program
 - 'exec', 'sleep', 'while' hang the whole program
 - More unknown bugs!
 - ALPHA level quality!



- General plans
 - Syntax-highlighting



- General plans
 - Syntax-highlighting
 - Code auto-complete



- General plans
 - Syntax-highlighting
 - Code auto-complete
 - Colorized output



- General plans
 - Syntax-highlighting
 - Code auto-complete
 - Colorized output
 - Restrict "un-safe" commands (Safe.pm)



- General plans
 - Syntax-highlighting
 - Code auto-complete
 - Colorized output
 - Restrict "un-safe" commands (Safe.pm)
 - Load/save edited code



- Advanced plans
 - Replace subroutines on-the-fly



- Advanced plans
 - Replace subroutines on-the-fly
 - symbol table manipulation



- Advanced plans
 - Replace subroutines on-the-fly
 - symbol table manipulation
 - optree manipulation using B:: modules (EVIL!)



- Advanced plans
 - Replace variables on-the-fly



- Advanced plans
 - Replace variables on-the-fly
 - "visible" package variables (mostly safe)



- Advanced plans
 - Replace variables on-the-fly
 - "visible" package variables (mostly safe)
 - lexical "private" variables (EVIL!)



Code contributions/ideas welcome!

http://bit.ly/iperl



Thank You!